AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in this application.

1. (Currently Amended) Filter for microwaves and millimeter waves comprising, ~~characterised in that it comprises~~ a planar transmission medium (1) which includes a conductor strip (3), metallic ground plane (4) and dielectric substrate (2) and in that it includes at least one split rings resonator (5a, 5b, 5c, 5d, 5e and 5f).

2. (Currently Amended) Filter according to claim 1, ~~characterised in that the~~ wherein said split rings resonators (5a, 5b, 5c, 5d and 5e) are metallic and are mounted in magnetic coupling with the planar transmission medium.

3. (Currently Amended) Filter according to claim 2, ~~characterised in that there are~~ further comprising metallic connections(6) between the conductor strip (3) and the metallic ground plane (4), behaving as a band-pass filter.

4. (Currently Amended) Filter according to claim 2, ~~characterised in that the~~ wherein said conductor strip (3) is electrically separated from the metallic ground plane (4), behaving like a band-rejection filter.

5. (Currently Amended) Filter according to claim 1, ~~characterised in that the~~ wherein said split rings resonators (5f) are metallic and are mounted in series with the conducting strip (3).

6. (Currently Amended) Filter according to claim 1, ~~characterised in that~~ wherein said planar transmission medium (1) is based on conventional transmission lines (coplanar, microstrip, stripline) or variants thereof.

7. (Currently Amended) Filter according to claim 1, ~~characterised in that the~~ wherein split rings resonators (5a, 5b, 5c, 5d, 5e and 5f) are etched in the metallic ground plane (4), making their surface the negative of that of the metallic split rings resonators (5a, 5b, 5c, 5d, 5e and 5f).

8. (Currently Amended) Filter according to claim 7, ~~characterised in that~~ wherein for the split rings resonators (5a, 5b, 5c, 5d and 5e) capacitive gaps exist in the conductor strip (3), behaving as a band-pass filter.

9. (Currently Amended) Filter according to claim 7, ~~characterised in that~~ wherein for the split rings resonators (5a, 5b, 5c, 5d and 5e), the conductor strip (3) shows continuity, behaving as a band-rejection filter.

10. (Currently Amended) Filter according to claim 7, ~~characterised in that~~ wherein for the split rings resonators (5f), the conductor strip (3) shows continuity, behaving as a band-pass filter.

11. (Currently Amended) Filter according to claim 1, ~~claims 1, 2 and 7, characterised in that it includes~~ wherein said metallic split rings resonators (5a, 5b, 5c, 5d and 5e) in magnetic coupling with the planar transmission medium (1) and split rings resonators (5a, 5b, 5c, 5d, 5e) etched in the metallic ground plane (4).

12. (Currently Amended) Filter according to claim 1, ~~characterised in that the~~ wherein said open rings (8) are of circular or polyhedral geometry and present a plurality of metallic elements and/or slits (7) etched into one or more levels of metal.

13. (Currently Amended) Filter according to claim 1, ~~any of the preceding claims, characterised in that~~ wherein it presents multiple pass- (13) or rejection-bands, with band width controllable by means of the number of slits (7) and/or the arrangement of the split rings resonators (5a, 5b, 5c, 5d, 5e and 5f) and/or their geometry.

14. (Currently Amended) Filter according to claim 1, ~~any of the preceding claims, characterised in that~~ wherein it is electronically reconfigurable and has built-in microelectromechanical switches (MEMS).

15. (Currently Amended) Antenna for microwaves and millimeter waves that includes at least one filter according to claim 1. ~~any of the preceding claims.~~